

80. *Two New Trematodes of the Family Opistholebetidae Travassos.*

(Preliminary Note.)

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During the past year I have been engaged in a study of the lymph system of amphistomoid fish-trematodes *Gyliauchen*, *Paragyliauchen* and *Telotrema*, members of the family Gyliauchenidae. *Opistholebes* is another amphistomoid fish-trematode which was found by Nicoll in *Sphaeroides lunaris* in North Queensland. Of this genus *O. amplicoeus* is the single species reported, and the lymph system of this genus was quite unknown hitherto.

Two apparently new trematode species, belonging to the family Opistholebetidae Travassos, for which the names *Opistholebes cotylophorus* and *Heterolebes maculosus* are here proposed, were recently collected by myself in considerable number from *Diodon holacanthus* Linnæus. *O. cotylophorus* bears an adhesive organ around the acetabulum, which is an over-growth of the posterior part of the body and may be considered as a remnant of the adhesive disc or cotylophore which is usually present in monogenetic forms. This organ is also found in *Heterolebes maculosus* but in a more advanced form of degeneration. Nicoll did not describe this organ in *O. amplicoeus*, but his figure is suggestive of its presence. The second characteristic structure of these flukes is the presence of milk-white coloured spots. These spots are globular in shape and distributed in the same extent as those of the vitellaria, but their disposition is deeper than the latter. The spot is composed of a large plasm-rich cell, and stains deeply with orange G, while the vitellarium stains black with haematoxylin.

In these species no special canal system for the lymph is developed, therefore even on this point *Opistholebes* should not be included in the same family with *Gyliauchen*. Diagnosis of these new species is as follows.

Opistholebes cotylophorus n. sp.

Body somewhat flattened, broad-oval 2.9 to 3.8 mm by 2.3 to 3.6 mm, widest at level of ovary, unspined. Oral sucker terminal; mouth terminal or subterminal; acetabulum at the posterior end of the body, provided with remnant of adhesive disc; ratio usually about 2:3. Pharynx nearly as large as oral sucker; prepharynx and esophagus very short; intestinal bifurcation close behind pharynx; caeca ending at the posterior borders of the testes. Genital pore submedian, directly behind the intestinal bifurcation.

Testes globular, symmetrical or slightly diagonal, antero-dorsal side

of the acetabulum. Cirrus pouch muscular, extending from genital pore to near receptaculum seminis.

Ovary ovoid, transverse, in front of the right testis. Uterus short, intercaecal, between testes and genital pore. Receptaculum seminis, as large as ovary, antero-dorsal side of ovary. Vitelline follicles small but well distributed, from near the oral sucker to the end of body, not limited to lateral position but overlapping the intestinal caeca, and also uterus, ovary, testes and acetabulum to some extent. Milk-white spots present, their shape and distribution same as those of vitellaria. Uterine egg oval, light yellow, 0.062–0.064 mm by 0.04–0.042 mm.

Lymph canal system absent.

Habitat. Intestine of *Diodon holacanthus* Linnæus.

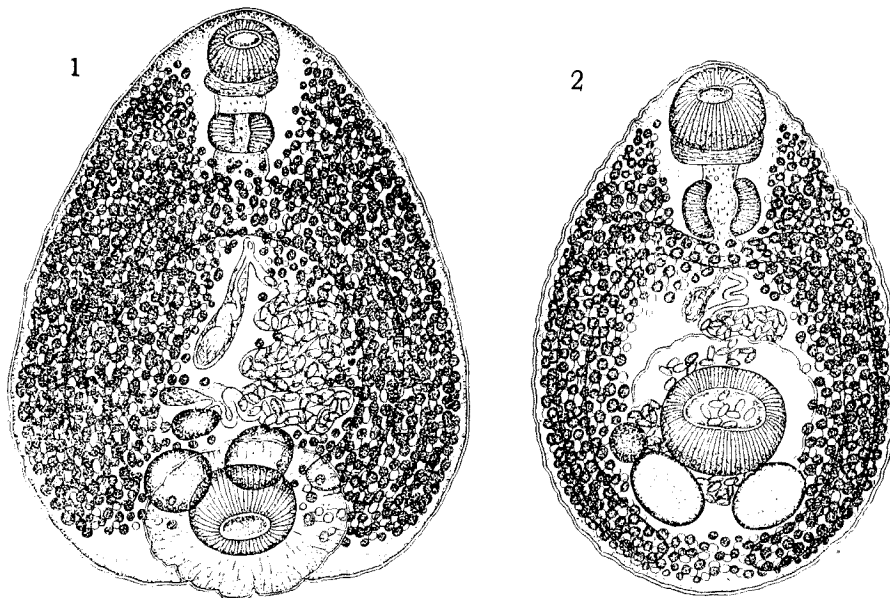


Fig. 1. *Opistholebes cotylophorus*. Ventral view.
From total preparation.

Fig. 2. *Heterolebes maculosus*. Ventral view.
From total preparation.

Heterolebes maculosus n. g. n. sp.

Body unspined, rather broad and thick, widest and thickest at acetabular zone, more pointed anteriorly, length 3 to 3.9 mm, width about $\frac{2}{3}$ body length. Oral sucker terminal, 0.5–0.7 mm in diameter, mouth terminal or subterminal; acetabulum 0.7–0.9 mm in diameter, about $\frac{1}{3}$ from posterior end, remnant of adhesive disc present but not remarkable. Pharynx large; prepharynx and esophagus very short; intestinal bifurcation close behind pharynx; caeca extending behind the testes. Genital pore submedian, directly behind the bifurcation.

Testes globular to ovoid, symmetrical, behind acetabulum. Cirrus pouch short, leading diagonally backward from genital pore half-way to acetabulum, containing a convoluted seminal vesicle, a small pars prostatica, evident but poorly developed prostate gland and slender, almost straight ejaculatory duct.

Ovary small, globular, antero-dorsal side of the right testis. Uterus short, intercaecal, between testes and genital pore. Receptaculum seminis, large, antero-dorsal side of ovary. Laurer's canal present. Vitelline follicles, sphaerical, small, developed in luxury, from near the anterior extremity to the end of body, lateral but overlapping intestinal caeca; behind testes coalesce in the median line. Milk-white spots present in the vitelline field. Uterine egg oval, light yellow, with stump-like projection at anopercular pole, 0.06–0.064 mm by 0.042–0.046 mm.

Lymph canal system absent.

Excretory pore dorsal, a little anterior to posterior extremity.

Habitat. In the intestine of *Diodon holacanthus* Linnæus.

In this species the acetabulum is not terminal, in some cases it lies almost in the centre of the body, and the adhesive disc is barely recognizable. The testes and ovary which lie in the posterior end of the body are situated behind the acetabulum. Owing to these points this species ought to be regarded as a new type.

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